

## CLAIMS

The following is claimed:

1. A method, comprising the steps of:
  - receiving billing information associated with a subscriber of a telecommunication service under a current rate plan;
  - processing the subscriber related billing information to produce organized data in a calling profile record for each telecommunication service being used by the subscriber;
  - creating a usage history table and a call detail table from the processed billing information in accordance with a specified billing period;
  - determining the cost of the current rate plan;
  - determining the cost of at least one other rate plan via use of the usage history table and call detail table; and
  - determining at least one proposed rate plan from the at least one rate plan of at least one telecommunication service provider that would save the subscriber telecommunication costs relative to the current rate plan.

2. The method of claim 1, wherein the step of determining at least one proposed rate plan further comprises the steps of:

providing a training set of data comprising the at least one proposed rate plan;

providing a test set of data comprising a most recent rate plan selected, wherein the most recent rate plan is one of a group of rate plans made of the at least one rate plan;

comparing the at least one proposed rate plan from the training set to the most recent rate plan of the test set; and

determining an ability of the training set to predict cost results of the test set.

3. The method of claim 2, wherein the step of determining the cost of at least one other rate plan comprises the step of using billing information from more than one period.

4. The method of claim 1, wherein the step of determining at least one proposed rate plan comprises the step of calculating an efficiency rating of various rate plans.

5. The method of claim 4, wherein the step of determining at least one proposed rate plan comprises the step of individually dividing a cost of the current rate plan by the cost of each of individual rate plan within the group of various other rate plans, resulting in the efficiency rating.

6. The method of claim 5, wherein an efficiency rating of greater than one indicates that the individual rate plan is more cost effective than the current rate plan.

1           7.       The method of claim 4, wherein the highest efficiency among the various rate  
2 plans is the most cost effective rate

1           8.       The method of claim 1, wherein the step of determining at least one proposed  
2 rate plan comprises the step of using a weighting factor that gives greater relevance to more  
3 current billing information as compared to older billing information.

1           9.       The method of claim 8, further comprising the step of calculating the  
2 weighting factor by computing the sum of the number of billing periods and the natural log of  
3 one minus the number of billing periods.

1           10.      The method of claim 1, wherein the step of determining at least one proposed  
2 rate plan further comprises testing the at least one proposed rate plan for sensitivity to changes  
3 in the calling profile record.

1           11.      The method of claim 10, wherein the step of testing for sensitivity comprises  
2 the step of perturbing the calling profile record.

1           12.      The method of claim 11, wherein the step of perturbing the calling profile  
2 record comprises the step of perturbing the calling profile record in a positive and negative  
3 fashion by a fixed usage amount.

1           13.     The method of claim 11, wherein the step of perturbing the calling profile  
2     record comprises the step of perturbing the calling profile record in a positive and negative  
3     fashion by one standard deviation.

1           14.     The method of claim 10, wherein the step of determining at least one proposed  
2     rate plan further comprises the step of excluding any discontinuities found in the calling  
3     profile record.

1           15.     A system, comprising:

2           a means for receiving billing information associated with a subscriber of a

3     telecommunication service under a current rate plan;

4           a means for processing the subscriber related billing information to produce organized

5     data in a calling profile record for each telecommunication service being used by the

6     subscriber, the means for processing being communicatively coupled to the means for

7     receiving;

8           a means for creating a usage history table and a call detail table from processed billing

9     information in accordance with a specified billing period, the means for creating being

10    communicatively coupled to the means for processing and the means for receiving;

11          a means for determining cost of the current rate plan, the means for determining cost

12    of the current rate plan being communicatively coupled to the means for creating, the means

13    for processing and the means for receiving;

14          a means for determining cost of at least one other rate plan via use of the usage history

15    table and call detail table, the means for determining cost of at least one other rate plan being

16    communicatively coupled to the means for determining the cost of the current rate plan, the

17    means for creating, the means for processing, and the means for receiving; and

18          a means for determining at least one proposed rate plan from the at least one rate plan

19    of at least one telecommunication service provider that would save the subscriber

20    telecommunication costs relative to the current rate plan, the means for determining at least

21    one proposed rate plan being communicatively coupled to the means for determining cost of

22    at least one other rate plan, the means for determining cost of the current rate plan, the means

23    for creating, the means for processing, and the means for receiving.

1           16.     The system of claim 15, further comprising a means for producing a report of  
2     the at least one proposed rate plan to enable selection of a best telecommunication service  
3     provider and a best rate plan, wherein the means for producing is communicatively coupled to  
4     the means for determining at least one proposed rate plan, the means for determining cost of  
5     at least one other rate plan, the means for determining cost of the current rate plan, the means  
6     for creating, the means for processing, and the means for receiving.

1           17.     The system of claim 15, further comprising a means for recommending that is  
2     communicatively coupled to the means for determining at least one proposed rate plan, the  
3     means for determining cost of at least one other rate plan, the means for determining cost of  
4     the current rate plan, the means for creating, the means for processing, and the means for  
5     receiving.

1           18.     The system of claim 17, wherein said means for recommending recommends at  
2     least one plan in the form of a rate plan evaluation record.

1           19.     The system of claim 15, wherein the number of proposed rate plans is  
2     predefined.

1           20.     The system of claim 15, wherein the means for determining at least one  
2     proposed rate plan also calculates an efficiency rating of various rate plans.

1           21.     The system of claim 20, wherein the means for determining at least one  
2     proposed rate plan also individually divides a cost of the current rate plan by the cost of each  
3     of individual rate plan within the group of various other rate plans, resulting in the efficiency  
4     rating.

1           22     The system of claim 21, wherein an efficiency rating of greater than one means  
2     that the individual rate plan is more cost effective than the current rate plan.

1           23.     The system of claim 21, wherein the highest efficiency among the various rate  
2     plans is the most cost effective rate plan.

1           24.     A system, comprising:

2           at least one transceiver configured to receive billing information associated with a

3     subscriber of a telecommunication service under a current rate plan;

4           a storage unit configured to store the billing information, wherein the storage unit is

5     communicatively coupled to the transceiver;

6           a memory comprising software, wherein the memory is communicatively coupled to

7     the transceiver and the storage unit;

8           a processor, communicatively coupled to the transceiver, storage unit, and memory,

9     configured by the software to:

10           process the subscriber related billing information to produce organized data in

11     a calling profile record for each telecommunication service being used by the subscriber;

12           create a usage history table and a call detail table within the storage unit from

13     the processed billing information in accordance with a specified billing period;

14           determine the cost of the current rate plan;

15           determine the cost of at least one other rate plan via use of the usage history

16     table and call detail table;

17           determine at least one proposed rate plan from the at least one rate plan of at

18     least one telecommunication service provider that would save the subscriber

19     telecommunication costs relative to the current rate plan; and

20           produce a report of the at least one proposed rate plan to enable selection of a

21     best telecommunication service provider and a best rate plan; and

22     wherein the transceiver is configured to transmit the report.



1           25.     The system of claim 24, wherein the report is transmitted to the subscriber.

1           26.     The system of claim 24, wherein a location of the report is transmitted to the  
2 subscriber.

1           27.     The system of claim 26, wherein the location of the report is on a Web site.

1           28.     The system of claim 24, wherein determining at least one proposed rate plan is  
2 performed by:

3           providing a training set of data comprising the at least one proposed rate plan;

4           providing a test set of data comprising a most recent rate plan selected, wherein the

5 most recent rate plan is one of a group of rate plans made of the at least one rate plan;

6           comparing the at least one proposed rate plan from the training set to the most recent

7 rate plan of the test set; and

8           determining an ability of the training set to predict cost results of the test set.

1           29.     The system of claim 24, wherein determining the cost of at least one other rate  
2 plan comprises the use of billing information from more than one period

1           30.     The system of claim 24, wherein determining at least one proposed rate plan  
2 comprises calculating an efficiency rating of various rate plans.

1           31.     The system of claim 30, wherein determining at least one proposed rate plan  
2     comprises individually dividing a cost of the current rate plan by the cost of each of individual  
3     rate plan within the group of various other rate plans, resulting in the efficiency rating.

1           32.     The system of claim 31, wherein an efficiency rating of greater than one means  
2     that the individual rate plan is more cost effective than the current rate plan.

1           33.     The system of claim 30, wherein the highest efficiency among the various rate  
2     plans is the most cost effective rate plan.

1           34.     A computer readable medium having a computer program stored thereon, the  
2     computer readable medium comprising:  
3                 logic configured to process subscriber related billing information to produce organized  
4     data in a calling profile record for each telecommunication service being used by the  
5     subscriber, where the subscriber is under a current rate plan;  
6                 logic configured to create a usage history table and a call detail table from the  
7     processed billing information in accordance with a specified billing period;  
8                 logic configured to determine the cost of the current rate plan;  
9                 logic configured to determine the cost of at least one other rate plan via use of the  
10    usage history table and call detail table; and  
11                logic configured to determine at least one proposed rate plan from the at least one rate  
12    plan of at least one telecommunication service provider that would save the subscriber  
13    telecommunication costs relative to the current rate plan.

- 1           35.     The computer readable medium of claim 34, further comprising logic
- 2     configured to produce a report of the at least one proposed rate plan to enable selection of a
- 3     best telecommunication service provider and a best rate plan.

1           36.     A system, comprising:

2           a storage unit configured to store billing information associated with a subscriber of a  
3     telecommunication service under a current rate plan;

4           a memory comprising software, wherein the memory is communicatively coupled to  
5     the storage unit; and

6           a processor, communicatively coupled to the storage unit, and memory, configured by  
7     the software to:

8                     process the subscriber related billing information to produce organized data in

9     a calling profile record for each telecommunication service being used by the subscriber;

10                    create a usage history table and a call detail table within the storage unit from

11     the processed billing information in accordance with a specified billing period;

12                    determine the cost of the current rate plan;

13                    determine the cost of at least one other rate plan via use of the usage history

14     table and call detail table;

15                    determine at least one proposed rate plan from the at least one rate plan of at

16     least one telecommunication service provider that would save the subscriber

17     telecommunication costs relative to the current rate plan; and

18                    produce a report of the at least one proposed rate plan to enable selection of a

19     best telecommunication service provider and a best rate plan.